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SOURCE Meditsinskiy Rabotnik, No 15 (827), 1949.SERGEY RUFOVICH MARDASHEV, LAUREATE OF THE STALIN PRIZE

Prof. B. Zbarskiy
Hero of Socialist Labor
Active Mem, Acad Med Sci USSR

Mardashev is one of the foremost young biochemists. He is well known for his work with problems on nitrogen exchange, amino acids and their compounds. He was one of the first in the USSR to obtain a crystalline form of insulin by extracting it with methyl alcohol. Much of his research involved the use of enzymes in the treatment of tumors. He is rated as one of the foremost experts on enzymotherapy of tumors.

At present, Mardashev is studying various problems concerning albumin. Such scientists as N. D. Zelinskiy, N. I. Garilov, D. L. Talmud, V. A. Engel'gardt, M. N. Lyubimova, A. Ye. Fraumensyn, and M. G. Kritsman have already done much to explain the structure of albumin and its exchange in living plant and animal cells.

During the latter part of 1947, Mardashev published his well known work, "Bacterial Decarboxylase of Asparaginic Acid." In it he described the isolation of a new bacteria, the pseudomycobacterium, which is characterized by its action only on asparaginic acid. The action of this bacteria releases a directly proportional amount of carbonic acid from asparaginic acid. He also developed a method for determining the presence of asparaginic acid in albumin and the amount of its products with a tolerance of tenths of milligrams. Soon, thereafter, he discovered the aspartic-decarboxylase, an enzyme which catalyzes the asparaginic acid within the bacteria. There is no doubt that the method of determining the presence of asparaginic acid with the aid of the aspartic decarboxylase will find wide application in techniques for identifying this amino acid not only in albumin, but also many complex biologic fluids, such as blood, lymph, cell fluids, etc. As a result of his work, Mardashev discovered a new bacteria, established the specific nature of its activity on asparaginic acid, found a new enzyme, and developed a new method for determining the presence of asparaginic acid.

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In his most recent publications, Mardashev reported some new methods for determining the presence of asparaginic acid. The reports are based on experiments which he and his co-workers, Semina, Gladkova, Etingof, and Balyasna, conducted during 1948 and 1949. They established the presence of a new enzyme which also proved an effective catalytic agent of asparaginic acid. Mardashev was able to prove that the catalysis of asparaginic acid progresses according to a process which has, as yet, not been determined, and is temporarily known as the omega-decarboxylation of asparaginic acid.

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